

What is claimed is:

1. Process for influencing air flows in a heating system for heating air, especially for heating the interior of a motor vehicle, comprising the steps of:

- producing a flow of heated air from at least one first heater into a flow path;
- producing a flow of heated air from at least one second heater into said flow path; and
- producing an auxiliary air flow in a direction from the at least one second heater toward the at least one first heater using at least one auxiliary fan.

2. Process according to claim 1, wherein said step of producing an auxiliary air flow is performed in a manner countering overpressurization of air flow in said flow path by the flow of heated air from said at least one first heater relative to the flow of heated air from said at least one second heater.

3. Process as claimed in claim 1, wherein the at least one first heater is a motor vehicle heater and the at least one second heater is an auxiliary heater.

4. Process as claimed in claim 1, wherein air which has flowed out of at least one first heater and air which has flowed out of at least one second heater enter and mix in at least one mixing chamber located in said flow path.

5. Process as claimed in claim 1, wherein the auxiliary fan is actuated depending on an output signal from a control device.

6. Process as claimed in claim 5, comprising the further steps of:

- detecting pressure states in the heating system with at least one pressure sensor, and
- producing a pressure-dependent input signal with said at least one pressure sensor and providing said pressure-dependent input signal to the control device.

7. Process as claimed in claim 5, comprising the further steps of:

- detecting temperature states in the heating system with at least one temperature sensor, and
- producing a temperature-dependent input signal with said at least one temperature sensor and providing said temperature-dependent input signal to the control device.

8. Process as claimed in claim 1 wherein the auxiliary fan is actuated directly depending on the output signal of a temperature sensor.

9. Process as claimed in claim 1, wherein the auxiliary fan is turned on when the second heater is turned on and is turned off when the second heater is turned off.

10. Process as claimed in claim 1, wherein the auxiliary fan is turned on when the first heater is turned on and is turned off when the first heater is turned off.

11. Process as claimed in claim 2, wherein the auxiliary fan is turned on when overpressurization of the heating system is recognized.

12. Process for detecting backflowing hot air through an air heater comprising the steps of:

- monitoring the temperature in an air inlet area of the heater by means of a temperature sensor which is located in the air inlet area and
- shifting the burner of the air heater into a state with lower heat output when a temperature-dependent quantity exceeds a boundary value.

13. Process as claimed in claim 12, wherein the burner is turned off by said shifting step when the temperature-dependent quantity exceeds the boundary value.

14. Process as claimed in claim 13, wherein the temperature gradient over time is used as the temperature-dependent quantity so that when a maximum positive temperature gradient is exceeded, the burner is turned off.

15. Process as claimed in claim 13, wherein the temperature itself is used as the temperature-dependent quantity so that when a maximum temperature is exceeded, the burner is turned off.

16. Process as claimed in claim 12, wherein aftercooling is carried out with or after the burner is shifted into the state with lower heat output.